

Supplementary File

Table S1. Household consumption per capita pre- and post-treatment by respondents (patients vs caregivers)

	Sample size N (%)		Consumption per capita pre-treatment					Consumption per capita post-treatment				
	Patients N (%)	Caregivers N (%)	Overall Median (P25, P75)	Patients Median (P25, P75)	Caregivers Median (P25, P75)	χ^2	P	Overall Median (P25, P75)	Patients Median (P25, P75)	Caregivers Median (P25, P75)	χ^2	P
Total	1334 (52.6%)	1200 (47.4%)	4014 (2601,6538)	4431 (2890,7064)	3506 (2316,6021)	39.70	0.00	1606 (902,2622)	1782 (1020,3024)	1445 (813,2200)	40.82	0.00
<i>Residency</i>												
Urban	965 (55.6%)	772 (44.4%)	4359 (2810,6952)	4774 (3067,7432)	3934 (2569,6422)	18.29	0.00	1846 (1124,2946)	2042 (1284,3436)	1670 (1017,2438)	31.19	0.00
Rural	369 (46.3%)	428 (53.7%)	3350 (2197,5374)	3746 (2447,5748)	2953 (2007,5139)	18.45	0.00	1069 (642,1789)	1190 (692,1959)	1029 (618,1684)	4.68	0.03
<i>Region</i>												
Eastern	293 (79.2%)	77 (20.8%)	6007 (4041,9280)	6061 (4172,9505)	5460 (3547,9152)	0.26	0.61	2456 (1400,4174)	2729 (1461,4292)	1827 (1127,2826)	5.31	0.02
Central	589 (54.1%)	499 (45.9%)	3615 (2328,6128)	3853 (2515,6255)	3340 (2143,6021)	6.53	0.01	1445 (803,2155)	1498 (835,2256)	1365 (803,1991)	4.11	0.04
Western	452 (42%)	624 (58%)	3744 (2531,6021)	4173 (2912,6506)	3465 (2360,5534)	16.12	0.00	1646 (913,2613)	1906 (1109,3183)	1445 (816,2284)	24.32	0.00
<i>Insurance</i>												
BMIUE	689 (56.9%)	521 (43.1%)	4629 (2935,7172)	4957 (3211,7626)	4137 (2649,6543)	9.83	0.00	2007 (1284,3199)	2208 (1440,3546)	1782 (1070,2569)	25.25	0.00
BMIUR	174 (51.9%)	161 (48.1%)	4014 (2703,6636)	3988 (2649,6636)	4014 (2810,6636)	0.00	0.97	1606 (963,2529)	1606 (963,2729)	1517 (978,2380)	0.57	0.45
NCMS	366 (46.4%)	423 (53.6%)	3333 (2188,5374)	3746 (2447,5994)	2904 (2007,5137)	19.25	0.00	1073 (642,1798)	1189 (690,1965)	1025 (615,1686)	3.84	0.05
Others	105 (52.5%)	95 (47.5%)	3698 (2418,6497)	4957 (3152,7430)	3042 (1741,4785)	23.18	0.00	1565 (803,2376)	1813 (835,3479)	1217 (679,1782)	1.28	0.26
<i>Household income</i>												
Quintile 1 (Bottom 20%)	228 (44.9%)	280 (55.1%)	2721 (1735,4226)	3191 (1950,4717)	2437 (1658,3547)	10.89	0.00	717 (438,1181)	787 (479,1191)	700 (428,1177)	0.96	0.33
Quintile 2	255 (50.3%)	252 (49.7%)	3118 (2167,4710)	3372 (2408,4710)	2893 (1992,4696)	4.00	0.05	1204 (865,1766)	1284 (867,1873)	1134 (863,1625)	5.13	0.02
Quintile 3	272 (53.8%)	234 (46.2%)	3864 (2649,6290)	4108 (2732,6374)	3567 (2569,6116)	2.30	0.13	1646 (1127,2288)	1711 (1199,2408)	1606 (1112,2143)	0.81	0.37
Quintile 4	287 (56.8%)	218 (43.2%)	4817 (3235,7474)	5057 (3527,7787)	4469 (2855,7084)	3.04	0.08	2141 (1373,2950)	2256 (1606,3372)	1833 (1188,2574)	8.71	0.00
Quintile 5 (Top 20%)	292 (57.5%)	216 (42.5%)	6422 (4541,9500)	6816 (5029,9966)	5871 (3948,8590)	10.88	0.00	3211 (1999,4926)	3612 (2408,5683)	2477 (1816,4034)	31.51	0.00

Table S2. Items measuring household income, consumption and out of pocket payment for cancer treatment

<i>Household income</i>
Covered
Wage
Non-wage: return on capital investments, dividends, interests, governmental subsidies
Self-employed income
Property income
Supportive income: pension paid to parents by children
Gift
Not-covered
Personal secret income of unknown origin, not recorded, tax evasion, undeclared
<i>Household Consumption</i>
Covered
Foods
Clothing
Daily necessities
Transportation
Communication
Housing mortgage or rent
Utility: Water, electricity and gas
Education
Medical care (drugs, services and supplies)
Insurance
Cultural activities
Entertainment activities
Not-covered
Capital investments and repairments
Other profit generating investment activities
<i>Out of pocket payments for cancer treatment</i>
Covered
Hospital services
Medicine
Not-covered
Insurance reimbursement for medical expenditure
Transportation
Out of hospital accommodations
Meals
Nutrients
Informal caregivers

Table S3. Correlation between region and urban/rural residency in respondents

	Eastern		Central		Western		Pearson χ^2 *	Contingency Coefficient*	Phi Coefficient*	Cramer's V*	Lambda*
	N	(%)	N	(%)	N	(%)					
Total	370	(100.00)	1088	(100.00)	1076	(100.00)	108.389	0.203	0.207	0.207	0.099
Urban	256	(69.19)	857	(78.77)	624	(57.99)					
Rural	114	(30.81)	231	(21.23)	452	(42.01)					

Note: *P<0. 001

Table S4. Collinearity diagnosis results

	Tolerance	VIF
Age (years)	0.87	1.15
Educational attainment	0.64	1.56
Occupation	0.94	1.07
Site of cancer	0.95	1.05
Residency	0.50	2.00
Region	0.90	1.11
Health insurance	0.50	2.00
Household income	0.65	1.53

Table S5. New cases of cancer recorded in China, 2015

Location	No. population (100,000)*	Incidence (per 100,000 population)**	Number (percentage) of cases
Total	13,746	288	3,953,957 (100%)
<i>Residency</i>			
Rural	6,035	267	1,608,221 (40%)
Urban	7,712	311	2,394,606 (60%)
<i>Region</i>			
Eastern	5,690	319	1,817,816 (48%)
Central	4,305	253	1,087,415 (28%)
Western	3,751	244	913,896 (24%)

Source of data: * National Bureau of Statistics of China. China Statistical Yearbook 2015. China Statistics Press;

** National Cancer Center. China Cancer Registry Annual Report 2018. People's Medical Publishing House

Table S6. Regional differences in urban household impoverishment post cancer treatment

	Sample size N (%)	Household consumption below CPL US\$1.2		Household consumption below WBPL US\$1.9		χ^2	P
		number	%	number	%		
Total	1737 (100.00)	89	5.1	188	10.8	15.784	0.000
Eastern	256 (14.74)	4	1.6	10	3.9		
Central	857 (49.34)	61	7.1	121	14.1		
Western	624 (35.92)	24	3.8	57	9.1		

Table S7. Accumulated consumption gap post cancer treatment in impoverished households in China

Characteristics of cancer patients	Total (median) Annual US\$ gap per capita		Estimates of impoverishment induced by cancer treatment in China	
	Households below China's poverty line US\$1.2	Households below global poverty line US\$1.9	Households below China's poverty line US\$1.2	Households below global poverty line US\$1.9
Total	27,488 (128)	91,081 (212)	31,170,395	115,238,459
Region				
East	1,266 (71)	6,108 (220)	6,221,542	30,010,513
Midland	15,616 (134)	48,746 (212)	15,777,767	52,298,712
West	10,605 (122)	36,226 (182)	9,171,086	32,929,233
Residency				
Rural	15179 (127)	48080 (212)		
Urban	12308 (128)	43001 (212)		
Health insurance				
UEBMI	5,699 (128)	21,245 (172)		
URBMI	2,589 (91)	10,201 (255)		
NCMS	15,179 (127)	48,080 (212)		
Others	4,019 (148)	11,555 (292)		
Household income				
Quintile 1 (Bottom 20%)	19,020 (132)	58,289 (256)		
Quintile 2	4,451 (112)	14,997 (185)		
Quintile 3	1,698 (82)	8,713 (148)		
Quintile 4	2,110 (150)	6,307 (158)		
Quintile 5 (Top 20%)	209 (44)	2,774 (153)		